

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 **Claim 1 (Original):** A multiple-zone power control system for controlling power
2 distribution to electric heating elements, the system comprising:
3 a power control unit comprising a plurality of control zones for controlling the
4 delivery of power to respective electric heating elements; and
5 a touch-sensitive key for alternately activating and deactivating a designated one
6 of the plurality of control zones when the touch-sensitive key is touched by a user;
7 wherein when all of the plurality of control zones are deactivated, the touch-
8 sensitive key must be touched for at least a cold start duration in order to activate the
9 designated one of the plurality of control zones; and
10 wherein when at least one of the plurality of control zones is activated, the touch-
11 sensitive key must be touched for at least a minimum key-touch duration in order to
12 activate the designated one of the plurality of control zones, the minimum key-touch
13 duration being shorter than the cold start duration.

1 **Claim 2 (Original):** The system of claim 1, wherein when the designated one of
2 the plurality of control zones is activated, the designated one of the plurality of control
3 zones will always be deactivated when the touch-sensitive key is touched for at least a
4 minimum key-touch duration, the minimum key-touch duration being shorter than the
5 cold start duration.

Claims 3 and 4 (Cancelled)

1 **Claim 5 (Original):** A method of reducing inadvertent power activation during
2 a wiping/cleaning operation of a touch-sensitive power control input panel, comprising
3 steps of:

4 sensing that a touch-sensitive on/off key has been touched by a user;

5 after the step of sensing, activating a power control zone that corresponds to the
6 touch-sensitive on/off key if at least one other power control zone is activated and the
7 on/off key remains touched for at least a minimum key-touch duration; and

8 after the step of sensing, activating a power control zone that corresponds to the
9 touch-sensitive on/off key if the on/off key remains touched for at least a cold start
10 duration, the minimum key-touch duration being shorter than the cold start duration.

1 **Claim 6 (Original):** The method of claim 5, further comprising a step of, after
2 the step of sensing, deactivating the power control zone that corresponds to the touch-
3 sensitive on/off key if the power control zone that corresponds to the touch-sensitive
4 on/off key is activated and the on/off key remains touched for at least a minimum key-
5 touch duration.

1 **Claim 7 (Original):** A multiple-zone power control system for controlling power
2 distribution to electric heating elements, the system comprising:
3 a power control unit comprising a plurality of control zones for controlling the
4 delivery of power to respective electric heating elements;
5 a touch-sensitive on/off key for alternately activating and deactivating a

6 designated one of the plurality of control zones when the touch-sensitive on/off key is
7 touched by a user; and
8 a touch-sensitive function key for controlling a function of the designated one of
9 the plurality of control zones when the touch-sensitive function key is touched by a user;
10 wherein the designated one of the plurality of control zones is prevented from
11 being activated if the touch-sensitive function key is touched while the touch-sensitive
12 on/off key is being touched.

1 **Claim 8 (Original):** The system of claim 7, wherein the designated one of the
2 plurality of control zones is not prevented from being deactivated if the touch-sensitive
3 function key is touched while the touch-sensitive on/off key is being touched.

1 **Claim 9 (Original):** The system of claim 7, further comprising:
2 a first group of keys including the touch-sensitive on/off key and the touch-
3 sensitive function key; and
4 a second group of keys being spaced apart from the first group of keys, wherein
5 the designated one of the plurality of control zones is not prevented from being activated
6 if a touch-sensitive key of the second group of keys is touched while the touch-sensitive
7 on/off key is being touched.

1 **Claim 10 (Original):** The system of claim 7, further comprising a touch-
2 sensitive slew-up key for incrementing a power level set point of the power control unit,
3 and wherein the touch-sensitive function key is a slew-down key for decrementing the
4 power level set point of the power control unit.

1 **Claim 11 (Original):** The system of claim 7, wherein the touch-sensitive
2 function key is a surface element selection key for selecting which of a plurality of
3 electric heating elements of one of the control zones to control.

1 **Claim 12 (Original):** A power control system for controlling power to electrical
2 heating elements, the system comprising:
3 a communication bus;
4 a first power controller for controlling power to a heating element of an oven, the
5 first power controller being connected to the communication bus;
6 a second power controller for controlling power to a heating element of a cooktop,
7 the second power controller being connected to the communication bus; and
8 a user interface controller for inputting and displaying control data for controlling
9 the second power controller, the user interface controller being connected to the
10 communication bus;
11 wherein when one of the first power controller and the second power controller
12 initiates a lockout condition, the other one of the first power controller and the second
13 power controller initiates a corresponding lockout condition in response to a lockout
14 signal being provided on the communication bus.

1 **Claim 13 (Original):** The system of claim 12, wherein the first power controller
2 communicates with the user interface controller via the communication bus for displaying
3 information on a display of the user interface controller.

1 **Claim 14 (Original):** The system of claim 12, wherein the first power controller
2 is a master controller and both the second power controller and the user interface
3 controller are slaves to the first power controller.

1 **Claim 15 (Original):** The system of claim 12, wherein at least one of the second
2 power controller and the user interface controller sends status information to the first
3 power controller via the communication bus.

1 **Claim 16 (Original):** The system of claim 12, wherein the user interface
2 controller includes a plurality of key-based interfaces for controlling each of a plurality
3 of cooking zones.

1 **Claim 17 (Original):** The system of claim 12, wherein one of the first power
2 controller and the second power controller provides operating power to at least one of the
3 first power controller, the second power controller, and the user interface controller.

1 **Claim 18 (Original):** The system of claim 17, wherein the operating power and
2 the communication bus are connected to at least one of the first power controller and the
3 second power controller via a common connector.

1 **Claim 19 (Original):** The system of claim 12, wherein the second power
2 controller comprises an upper temperature limit input for receiving an upper temperature
3 limit signal from an upper temperature limit sensor of the heating element of the cooktop.

1 **Claim 20 (Original):** The system of claim 19, further comprising a bi-metal
2 thermostatic switch connected to the upper temperature limit input of the second power
3 controller, the bi-metal thermostatic switch serving as the upper temperature limit sensor.

1 **Claim 21 (Original):** The system of claim 12, wherein the second power
2 controller comprises a hot-surface input for receiving a hot surface signal from a hot
3 surface sensor of the heating element of the cooktop.

1 **Claim 22 (Original):** The system of claim 21, further comprising a bi-metal
2 thermostatic switch connected to the hot surface input of the second power controller, the
3 bi-metal thermostatic switch serving as the hot surface sensor.

1 **Claim 23 (Original):** The system of claim 12, further comprising a relay
2 connected to the second power controller for providing power to the heating element of
3 the cooktop.

1 **Claim 24 (Original):** The system of claim 12, wherein the communication bus
2 comprises a single-wire serial data bus.

1 **Claim 25 (Original):** The system of claim 12, wherein one of the first power
2 controller and the second power controller comprises a test mode for allowing both the
3 first power controller and the second power controller to be demonstrated without

4 providing power to the heating elements, and wherein a test signal is provided to the
5 communication bus upon activation of the test mode.

1 **Claim 26 (Original):** A cooktop for a cooking appliance, the cooktop
2 comprising:

3 a first heating element;

4 a second heating element at least partially surrounding the first heating element;

5 a third heating element at least partially surrounding the second heating element;

6 a power controller for selectively providing power at a selected level according

7 to three operating modes, the three operating modes comprising: a first operating mode

8 in which the power controller provides power at the selected level to the first heating

9 element, a second operating mode in which the power controller simultaneously provides

10 power at the selected level to the first heating element and the second heating element,

11 and a third operating mode in which the power controller simultaneously provides power

12 at the selected level to the first heating element, the second heating element and the third

13 heating element; and

14 a touch-sensitive mode selection key for selecting each of the three operating

15 modes, wherein the power controller selects a next one of the three operating modes

16 according to a predetermined sequence each time the mode selection key is touched.

1 **Claim 27 (Original):** The cooking appliance of claim 26, wherein the second
2 heating element concentric to the first heating element, and the third heating element
3 concentric to both the first heating element and the second heating element.

1 **Claim 28 (Original):** The cooking appliance of claim 26, wherein the
2 predetermined sequence comprises the first mode followed by the second mode followed
3 by the third mode.

1 **Claim 29 (Original):** The cooking appliance of claim 28, wherein the
2 predetermined sequence further comprises the third mode followed by the first mode.

1 **Claim 30 (Original):** The cooking appliance of claim 28, wherein the
2 predetermined sequence further comprises the third mode followed by the second mode.

1 **Claim 31 (Original):** The cooking appliance of claim 26, wherein the
2 predetermined sequence comprises the third mode followed by the second mode followed
3 by the first mode.

1 **Claim 32 (Original):** A cooktop for a cooking appliance, the cooktop
2 comprising:
3 a first heating element;
4 a second heating element;
5 a third heating element;
6 a first user interface controlling the first heating element individually in a first
7 operating mode of the first user interface, controlling the first heating element and the
8 second heating element together in a second operating mode, and the first heating
9 element, the second heating element, and the third heating element together in a third

10 operating mode;
11 a second user interface controlling the third heating element individually in the
12 first operating mode; and
13 a touch-sensitive mode selection key provided to the first user interface for
14 selecting each of the three operating modes, wherein the first user interface selects a next
15 one of the three operating modes according to a predetermined sequence each time the
16 mode selection key is touched.

1 **Claim 33 (Original):** The cooktop of claim 32, wherein the second heating
2 element is positioned between the first heating element and the second heating element.

1 **Claim 34 (Original):** The cooktop of claim 33, wherein the predetermined
2 sequence comprises the first mode followed by the second mode followed by the third
3 mode.

1 **Claim 35 (Original):** The cooktop of claim 34, wherein the predetermined
2 sequence further comprises the third mode followed by the first mode.

1 **Claim 36 (Original):** The cooktop of claim 34, wherein the predetermined
2 sequence further comprises the third mode followed by the second mode.